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PARALLEL WAR IN A MAJOR REGIONAL CONTINGENCY: IMPLICATIONS FOR
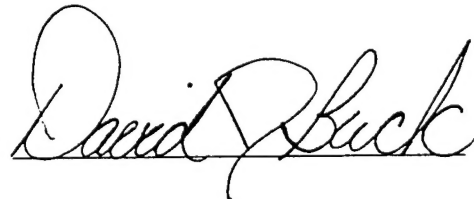THE JOINT FORCE AIR COMPONENT COMMANDER
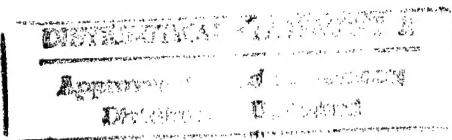

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the
requirements of the Joint Military Operations Department.

The contents of this paper reflect my own personal views and are not necessarily endorsed
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Abstract of

PARALLEL WAR IN A MAJOR REGIONAL CONTINGENCY: IMPLICATIONS FOR THE JOINT FORCE AIR COMPONENT COMMANDER

The success of the air operations in Desert Storm set a dangerous precedent. Americans will expect the same, if not better results in the next conflict. The success in Desert Storm is largely attributed to a new type of operational art involving the Joint Force Air Component Commander and a revolutionary concept called parallel war. Although technology enables the prosecution of parallel war, it may not be feasible in every major regional contingency in which the United States becomes involved. In Desert Storm the conditions were ideal to employ parallel war; it is unlikely that these conditions will be replicated in the next conflict. The nature of the threat and the threat environment may impede the ability to conduct parallel war. Before claiming parallel war as a panacea, commanders must consider the limitations of and counters to parallel warfare. To expect future success without further reflection and preparation will likely result in disaster.

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INTRODUCTION

*The United States relies on the Air Force and the Air Force
has never been the decisive factor in the history of wars.*

Saddam Hussein (1990)[1]

As Carl von Clausewitz maintained, each age has its own unique brand of warfare.[2] Clausewitz also recognized that simultaneous attacks were preferable but not realistic given the technology of his time. Speaking theoretically he wrote that, ". . . if all the means available were, or could be, simultaneously employed, all wars would automatically be confined to a single decisive act or a set of simultaneous ones," but, he continued, ". . . the abstract world is ousted by the real one and the trend to the extreme is thereby moderated."[3] In his chapter on "Unification of Forces in Time," he wrote that, ". . . all forces intended and available for a strategic purpose should be applied *simultaneously* [emphasis in original]; their employment will be the more effective the more everything can be concentrated [sic] a single action at a single moment."[4]

As the curtain began to fall on the twentieth century, the world witnessed the United States unveil its unique brand of warfare. People watched with awe as the Joint Force Air Component Commander (JFACC) orchestrated simultaneous air strikes with surgical precision against multiple Iraqi targets. Weeks of fighting remained, but the initial air assault war so overwhelming that Iraq was unable to mount a coherent military response thereafter.[5] This was the first war in which air power achieved its true potential and zealous air power advocates began espousing the idea of an independent and war-winning air "campaign."[6] Desert Storm fueled the start of a new era as a futuristic high-octane brand of operational art emerged leaving an indelible mark on American society--parallel warfare was born.

History never exactly repeats itself, but according to the Institute for National Strategic Studies in *Strategic Assessment 1995*, the most likely source of conflict over the next decade will involve developing states in a major regional contingency (MRC).[7] This paper

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explores parallel warfare within the context of a future MRC and extrapolates implications for its use from the perspective of the JFACC. Although technological advances provide the JFACC with the tools necessary to employ parallel warfare, it may not be feasible in every MRC in which the United States will become involved. There are many limitations of and counters to parallel warfare and to expect future success without reflection and preparation will almost certainly result in failure.

Some caveats are warranted at this point. First, this monograph examines parallel war only from the air power perspective. This emphasis on air power does not dismiss the reality that warfare is inherently joint and air power is but one component of the total military package. It is not the author's intent to convey a parochial attitude or convert readers into air disciples; other services and their associated forces (maritime, ground, etc.) are also capable of conducting parallel warfare. Second, this paper uses air power historian Professor Richard Hallion's definition of air power, " the various uses of airborne vehicles and forces to achieve national needs by the projection of military power or presence at a distance."[7] This broad definition includes manned aircraft (fixed- and rotary-wing), rem ly piloted vehicles, and cruise missiles to name a few. Third, this paper examines only one type of potential future conflict (major regional contingencies); parallel warfare will have different applications in other conflict environments.[8] Limiting the scope of this paper allows a more insightful and focused elucidation of the subject rather than merely entertaining the reader with space-filling rhetoric. Fourth, air power is not service specific. Certainly the U.S. Air Force has the preponderance of air assets, but to equate and limit air power to a single service is a fallacy. Finally, the history of parallel warfare is short; Desert Storm is the single historical basis for analysis and comparison and therefore is referenced almost exclusively to illustrate various points.

Before proceeding, it is important to have a basic understanding of the key terms associated with this radically new form of operational art.

TERMS DEFINED

JFACC. While the idea of one "air boss" transcending traditional service boundaries has been discussed for several years, Desert Storm was the first time it was used in a major conflict.[9] The basic tenet underlying the JFACC concept is the centralized control over all air assets by a theater-level commander in order to maximize the potential value of air power.[10] During Desert Storm, the JFACC was Air Force General (then Lieutenant General) Horner. There were some interservice disagreements over who should have the overall tasking authority for air assets in the theater, but ultimately it was decided by who brought the most air power to the theater.[11]

Parallel vs. Serial War. What is parallel war? Despite being the star of Desert Storm, parallel war is not a well-known phenomenon. Simply put, parallel war is a way of employing military force that takes advantage of technological superiority. A working definition of parallel warfare is the concurrent attack of enemy centers of gravity to achieve strategic paralysis.[12] The goal is to simultaneously attack these centers of gravity across all levels of war (strategic, operational, and tactical)--at rates faster than the enemy can repair and adapt.[13]

Many observers of the Gulf War saw parallel warfare being employed without realizing what it was.[14] The air operation was a model of efficiency; to say that it set the tone for a quick and decisive victory with few casualties is a definite understatement. Americans will expect the same, if not better results, in the next conflict. Parallel war came to the forefront mainly due to technological advances in American air power, especially in the areas of stealth and precision-guided munitions (PGMs). Parallel warfare is distinctly different from what most people are familiar with--serial or sequential warfare. In serial warfare, targets are attacked in sequence, one after the other, normally with a tactical or operational focus; this has been the primary means of fighting wars throughout history.[15]

The distinction between serial warfare and parallel warfare is easy to comprehend if thought about in terms of separate electrical circuits. On the serial circuit, current must travel through each fixture or "target" before proceeding to the next. On the parallel circuit, the current is carried to each "target" simultaneously.[16]

SETTING THE STAGE--THE NATURE OF THE THREAT

In future regional conflicts, the competitor will likely be a state that possesses one dominant weapon system or a limited number of emerging weapons with a credible inventory of current weapons.[17] Examples of states that may threaten U.S. interests include Iraq and North Korea.[18]

Jeffery Barnett lists five key points to consider when envisioning future regional conflicts.[19]

First, the competitor will always be militarily inferior; it will not have the breadth or depth of weapons available to the United States. It cannot slug it out toe-to-toe, but its goal would be to raise the cost of American involvement beyond an acceptable level.[20]

Second, the regional competitor will present operational centers of gravity to attack. For U.S. involvement, we can assume the belligerent is doing something outside its borders that is contrary to U.S. interests. For example, when Iraq invaded Kuwait, the invading forces required massive numbers personnel and equipment to seize and hold territory. These operational forces present numerous critical targets for attack. Their detection and targeting would be a prime mission for the JFACC.

Third, the competitor will have proficiency in only a few mission areas, as opposed to many. For example, the state may invest only in stealth technology, cruise missiles, PGMs, state-of-the-art fighter/bombers, limited numbers of mobile ballistic missiles, submarines, weapons of mass destruction, etc.[21] These military capabilities will be considerably less than a major world power with a well-developed and a technological

advanced military. The implication, of course, is that these emerging states can operate on a smaller resource base. This means there are dozens of nations capable of fielding this type of military. Essentially, any nation with the wealth to buy limited numbers of emerging weapons could mount a threat to U.S. objectives.

Fourth, the belligerent must be capable of not only fielding, but also operating these advanced weapon systems. They must integrate the emerging systems with the rest of their inventory in a synergistic way. They may employ new technologies in innovative ways; they will be new to the "game" and it will be easier for them to think "outside the box."

Finally, unlike war on a larger scale, a major regional contingency would probably not threaten vital U.S. interests; this may preclude domestic support for a rapid buildup. Additionally, warning time would be shorter than for war with a major world or "peer" competitor. This favors the belligerent state since it would need little time to field its limited number of emerging weapons. The United States will likely have only existing units at its disposal; employments would largely mirror those exercised in peacetime.

With these key assumptions in mind, generic characteristics of the operational environment can be explored.

THE OPERATIONAL ENVIRONMENT

It is neither desirable nor possible for the United States to become involved in every regional conflict.[22] Once the decision is made for military intervention, the JFACC must understand the limitations and exploit the advantages of each combat-unique environment. Because of the geopolitical environment, it is safe to assume future MRCs will occur within and adjacent to the enemy's borders; this will be several thousand miles away from the continental United States.[23] Additionally, advanced basing and county overflight permission cannot be taken for granted. The JFACC must also consider the implications of using parallel war against a technologically inferior adversary.

Physical Environment. The Gulf War environment was fertile ground for the JFACC to conduct parallel warfare. The terrain was relatively flat and open, advanced basing was plentiful, and there were virtually no restrictions on country overflight. Even with all these advantages, the air operation still had to be extended for several days due to poor weather. Move the conflict to almost anywhere else and the potential problems with not only weather, but also terrain, foliage, and overflight rights can complicate the parallel warfare equation.[24]

Forward Basing and Combat Support. The United States may have the technological capability to conduct decisive action from the third dimension, but projecting this power thousands of miles away can be the JFACC's biggest obstacle and the planners' worst nightmare.[25] Initially, the JFACC's primary concerns are getting the right mix of aircraft and combat support close enough to the actual battlespace without jeopardizing these high-value assets.[26]

One of the biggest vulnerabilities (and restraints) of land-based air power is the ground base and associated infrastructure needed to support modern aircraft. A savvy enemy will attack these forward bases before they are operational. The destructive capability of air power displayed in Desert Storm will convince future adversaries that stopping the air power of the United States before it can be massed is critical.[27]

A future adversary will also consider the JFACC headquarters a lucrative target. Recent literature acknowledges the vulnerability of the in-theater JFACC and proposes a major change in the aerospace command and control system by basing the JFACC in the continental United States (CONUS).[28] "Basing the JFACC in CONUS would avoid creating a fixed, in-range, high-value target for the enemy. It also would allow immediate planning/tasking of the aerospace campaign."[29]

Technological Environment. The high technology used to employ parallel war is not necessarily ideal for conducting operations against technologically inferior adversaries. There may be fewer relevant targets for PGMs in a low technology society versus a highly industrialized country.

> North Vietnam fought against a vastly superior US military. However, North Vietnam was able to counter many of the technological advantages the US held by using virtually no technology. People carrying goods on their backs or bicycles instead of trucks can be a suitable alternative if the amount of supplies required is low. Trucks and other motorized vehicles provide a ready target for advanced conventional munitions, but people and mules do not.[30]

Deception and camouflage are other low technology counters and the JFACC must anticipate their use in a future MRC. During Desert Storm the Iraqis made use of deception to reduce the effectiveness of coalition air strikes. They used decoys, smoke, and fake bomb craters with some degree of success, but they were not designed with the modern concept of parallel warfare in mind. The adversary of the future will use deception more effectively in defeating the technology associated with parallel war.[31]

Finally, a technologically inferior competitor can use mobility to combat parallel warfare. In Desert Storm the JFACC expended considerable assets hunting mobile Scud launchers--this was dedicated air power that was unable to conduct offensive missions against other Iraqi targets. Regional competitors will heed this lesson in future conflicts with the United States.

> Hardest to find were the mobile launch sites. These were no more than level spaces along the roadside that the Iraqis had surveyed ahead of time so launch crews would know their exact locations for aiming purposes. These crews hid the Scuds and launchers, often in residential areas, by day and moved them to their launch sites at night.[32]

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With the enemy and operational environment defined, the initial attack and air tasking order (ATO) can be examined.

THE INITIAL ATTACK AND THE AIR TASKING ORDER

Initial Attack--Foundation for Victory. As stated earlier, parallel war seeks to inflict strategic paralysis by simultaneously striking a broad range of key targets across the entire spectrum (strategic, operational, and tactical). Simply loading stealthy aircraft with PGMs and launching them randomly against high-value targets does not meet this criterion--it may achieve tactical success, but may also result in strategic failure. Detailed and advanced planning for the initial attack is obviously a desirable and advantageous condition for conducting parallel war.[33] During Desert Storm the JFACC enjoyed the luxury of advanced air operations planning conducted by the Checkmate planners in the Pentagon. Checkmate is the Air Force threats and wargaming division. The Checkmate office had begun to analyze Iraqi vulnerabilities and centers of gravity immediately after the invasion of Kuwait.[34] These planners developed "Instant Thunder", a furious and sustained air operation to achieve the coalition's political objectives in the shortest time and with the least cost in life and collateral damage. Instant Thunder attacked Iraqi weaknesses while avoiding their strengths--most notably the large Iraqi ground forces in prepared defensive positions.[35]

> By five minutes after H hour (H+5), the air campaign had struck 20 critical targets in the Baghdad area alone. By H+60, an additional 25 targets had been hit in the Baghdad area: area defense and C^3 nodes; military defense and governmental headquarters facilities; electrical facilities; petroleum, oil, and lubricants production and distribution capabilities; and production plants for weapons of mass destruction--nuclear, biological, and chemical weapons. These attacks were complemented by strikes on high-value targets throughout the country.[36]

Although detailed advanced planning for the initial strike is desirable, in a MRC environment the JFACC cannot rely on receiving on the amount of support that Lieutenant

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General Horner enjoyed. Unlike a full-scale war with a peer competitor, a MRC may occur at anyplace with little or no advanced warning--response time may be limited. The JFACC and his/her planning cell must be prepared to quickly develop the master attack plan (MAP) and recommend apportionment decisions to the joint force commander for the initial strike. The MAP is a detailed plan for conducting the overall air operation; it includes ATOs that provide daily specific direction for all air operations in the theater. Together, the MAP and ATOs ensure the entire air operation is conducted in a well-orchestrated manner.[37] The JFACC must not only consider desired target sets, but also the availability of mission-unique air platforms to carry out the tasking. When developing the MAP and ATO, the intelligence community (J2) is as important to prosecuting parallel war as air power; without the information it provides the PGMs revert to expensive gravity bombs.[38]

Putting the pieces of the puzzle together, it is now possible to formulate implications for the JFACC in this conflict environment.

IMPLICATIONS

Lessons from previous experiences are only truly learned when we incorporate them into our planning, doctrine, tactics, and training.

Kenneth Allard[39]

Generic Planning and Initial Targeting Considerations. Specific intelligence information on enemy capabilities is vital, but some JFACC targeting and planning considerations will remain constant.

First, in order to conduct parallel war from the third dimension, the JFACC must plan to achieve air superiority early. Air power theory asserts that air superiority is best obtained through offensive strikes on the enemy air force.[40] Plans must ensure that forces are dedicated to seize control of the air; with the freedom to fly at will, the rest falls into place.[41]

Although the competitor will not be able to field air forces of suitable quality or quantity to compete with the United States on an equal basis, destruction of enemy aircraft on the ground should be a priority. Offensive counterair operations against enemy air bases can be expected to destroy the regional competitor's ability to launch coordinated strike packages.[42] Integrated air defense systems are also important targeting considerations when seeking to achieve air superiority. These air superiority target sets must be included in the initial ATO.

The JFACC must have a cohesive and early arriving headquarters and the right combination of assets; additionally, they must arrive in the correct sequence, and they must be protected. In the initial stages of preparing for parallel war from forward-deployed locations, defense means offense. Control of the air implies adequate defensive counterair to protect critical centers of gravity and other vulnerable high-value assets. Refueling aircraft, airborne warning and control system aircraft, airfields, and the JFACC headquarters deserve special consideration. Assets for defensive counterair not only include combat aircraft but also aerospace forces for reconnaissance and surveillance to reduce the probability of surprise attack; these platforms will also form the information base needed for later offensive operations. The main threat will stem from stealthy cruise missiles launched from mobile launchers that have the ability to jeopardize the security of these forward-deployed assets. The JFACC must balance the utility of the resources committed to defense against their potential offensive productivity.

The JFACC will need aerial refuelers early--and plenty of them. Even though r aircraft have impressive range, especially when carrying external fuel tanks, the distance that can be safely covered without in-flight refuelings is measured in the hundreds of miles--the truly global reach of air power requires pre-planned tanker support for even long-range aircraft.[43]

Although the F-117s proved their worth in Desert Storm, there are a finite number of these stealthy assets; the Air Force has only 56 in its inventory.[44] This limited number of

stealthy aircraft means nonstealthy aircraft must shoulder some of the burden when conducting initial strikes. This makes the limited number of electronic war (EW) platforms available to the United States distinct force multipliers. Until every combat aircraft is stealthy, EW assets will be critical to the success of parallel warfare.[45] The JFACC must ensure these EW aircraft (mainly from the Navy) are available to support early air offensive operations.

Second, strategic targets must focus on ways to isolate the enemy's national leadership from their instruments of military power. Generic target considerations against a belligerent in a MRC should include key nodes of command and control facilities and energy targets such as electrical power grids and switching stations. A highly centralized military like Iraq's is indicative of the type a future regional competitor will field. This centralized command structure is vulnerable to attack on its command and control system.[46] Once national leadership is isolated, military instruments of power will wither likes grapes on a severed vine.

Third, operational target considerations should include enemy lines of communications of key theater-level activities, air defense headquarters, and stocks of munitions, fuel, and food. Considerations should also include preparing the battlefield for possible ground operations at a later date. This is accomplished by striking logistical systems such as key bridges or railroads to isolate forward-deployed enemy forces from their main supply bases.

Fourth, tactical target set evaluations should include unit headquarters, key weapon systems, and individual weapon system defenses.

Finally, the JFACC must conduct the initial aerial assault *simultaneously*. The strikes must *complement* each other in order to *paralyze* the enemy by exploiting the advantages of surprise, stealth technology, PGM-laden aircraft, cruise missiles, and EW assets.

<u>Subsequent Target Selection and Dissemination</u>. The sheer volume of strikes mandated by parallel war places a premium on quick and accurate bomb damage assessment (BDA). During Desert Storm the ATO contained all the detail necessary to coordinate more than 3,000 sorties a day.[47]   After the initial aerial onslaught, accurate BDA is essential for subsequent ATO development. Poor BDA can result in restriking targets that are damaged beyond utility. This can be hampered by the physical environment (such as inclement weather), aircrew exaggeration of sortie effectiveness, enemy deception, camouflage, and mobility.

Virtually every future adversary will counter U. S. technology with deception, camouflage, and mobility because they are inexpensive and highly effective. To help balance this high technology/low technology dilemma, the JFACC should consider using U. S. Army Rangers and other U. S. Special Operations Forces in conjunction with aerial reconnaissance to ascertain BDA. Ground forces are especially useful for locating high-value and mobile targets that are masked by camouflage and deception. Examples may include mobile launchers, launch sites, and bunkers.

Disseminating daily ATOs is critically important in order for the JFACC to orchestrate such a complex operation. In Desert Storm, the United States had the luxury of time and advanced planning to establish a complex command, control, and communications network. Even so, interoperability in disseminating the ATO was a major problem *between our own forces*.

> The Air Force Computer-Aided Force Management System (CAFMS) used to produce the daily "frag" was not compatible with Navy computers. The lack of a common transmission and computer system to send and receive the ATO between the Air Force and Navy terminals created great difficulties. The Navy had to resort to ferrying the ATO on floppy diskette each night from Riyadh to the command aircraft carriers in the Red Sea and Persian Gulf. From the command ships, the ATO was carried by helicopter to other carriers and ships.[48]

In this Information Age, it is appalling that couriers were required to deliver updated ATOs. Unlike a major world conflict, in a future MRC the United States probably will not have the advantage of detailed advanced planning. It may be a "come as you are" war; to be effective the JFACC must come prepared to fight the way we train. Parallel war relies on the high speed transfer of information between friendly forces--air, sea, and ground. Without communications interoperability between our own forces the JFACC cannot exploit the cumulative and synergistic potential of parallel warfare--it is similar to limiting the use of an office computer to data processing only. To ensure interoperability, all branches of our armed forces must shed their parochial attitudes and agree to a common computer-aided force management tool such as CAFMS. Without this basic agreement, the JFACC is shackled and parallel war reverts to mere shell of its true potential.

CONCLUSION

Too often two equally fallacious viewpoints concerning battlefield air support have reigned: that air support has not been of significance to the land battle and that air support has been decisive in land warfare. The actual answer, of course, is in the middle.

Richard Hallion[49]

"Whenever a radical new form of warfare emerges there is a tendency to overstate its case."[50] The most challenging aspect of this paper is to draw conclusions, and assess the validity of these conclusions, from limited historical experience--Operation Desert Storm. Because today's state of the art may very well be tomorrow's antiques, we do not have the luxury of waiting for 10 replications of an event before we decide that real lessons exist.[51]

The first lesson of this study is that parallel warfare is not a universal panacea. What is important, is to understand what it is and what it can do. In other words, do not ignore the capability, but simply use it when prudent. This holds true for a number of reasons. First, parallel warfare is resource-intensive and requires a great number of assets to prosecute.

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Operational sustainment and a finite number of specialized platforms limit the capability to fight two or more major regional conflicts simultaneously. The loss of even one specialized platform (e.g., F-117) significantly reduces the ability to prosecute parallel war. Second, a high degree of information detailing enemy capabilities and vulnerabilities is essential. Without this information, advanced planning required for the initial attack cannot take place and the benefits associated with parallel warfare disappear. Parallel warfare then becomes a liability and its indiscriminate or ad hoc use may do more harm than good. It would be like trying to force the proverbial square peg into a round hole. This problem may be alleviated by tasking the J5 (with support from J4) to develop generic off-the-shelf plans for parallel warfare, but this is unrealistic since the plethora of possible contingencies would require a multitude of exotic plans in order to be adequately prepared. Third, parallel warfare is clearly not feasible in every environment. Against a modern country with a centralized military (and with the advantage of forward-basing and overflight rights) parallel warfare may make sense. On the other hand, there may be instances where parallel warfare may not be an option. A technologically inferior country using guerrilla warfare based on survival instead of offensive action could effectively counter parallel war and test the fickle resolve of the American public.

Second, the proposal to base the JFACC Headquarters in CONUS in order to provide protection and allow better prosecution of the war effort is flawed. Although technological advances (i.e., fiber-optic cable and satellite down links) make it feasible, removing a key operational commander from the theater to control air operations remotely takes away the JFACC's individual perspective on the war and personal interaction with the troops. Instead of the targeting the JFACC's in-theater headquarters, a savvy enemy could destroy key satellite down link stations or sever fiber optic cables. These will be as accessible (if not more so) than the JFACC headquarters and their destruction will totally isolate the JFACC from the war effort.

Third, the Chairman of the Joint Chiefs of Staff should task the Commanders-in-Chief to assess the feasibility of establishing a JFACC Quick Reaction Response Cell. This response cell could quickly assemble for early deployment; it would have dedicated representatives from all services and from the J2, J4, J5, and J6 communities. The primary advantages are quick deployment, familiarity, improved interoperability, and reduced parochialism. A recognized problem with parallel warfare is that it has an obvious Air Force flavor; other services are understandably slow to support such a parochial sounding operation. Equal representation in the form of a response cell should help alleviate this problem. Admittedly, an Air Force officer will be the logical choice for the JFACC in most scenarios based on the ratio of assets deployed, but there may be situations (e.g., no forward land-basing available) in which the JFACC should come from the Navy or other service.

Finally, the notion of parallel war to conduct an independent and war-winning air "campaign" has surfaced and must be addressed. The success of parallel war during Desert Storm convinced many airmen that air power is a decisive entity in and of itself. This inference is an overcompensation in an attempt to justify the Air Force as the predominant military service after several decades of marginal utility (i.e., strategic bombing in Germany during World War II, Linebacker I and II during the Vietnam War, etc.). Future war will not take place in a vacuum; even under ideal conditions, the success of parallel war hinges on substantial ground and logistical support.

America's recent manifestation of operational art in the form of parallel war affords the JFACC the opportunity to dramatically influence the course of events and shape the battlespace, but it will not always be dominant or applicable. Each service should applaud its recent success and file it away for potential future use. The utility of parallel warfare is situation-dependent and it is simply another tool available in the commander's ever-expanding toolbox.

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NOTES

[1]Richard P. Hallion, *Storm Over Iraq* (Washington: Smithsonian Institution Press, 1992), 162.

[2]Carl von Clausewitz, *On War*, Edited and Translated by Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1989), 593.

[3]Ibid., 79.

[4]Ibid., 209.

[5]James P. Coyne, *Airpower in the Gulf*, (Arlington, VA: Air Force Association, 1992), 9.

[6]During World War II, the strategic bombing of ball bearing plants in Germany failed to substantially reduce the war-making capacity of Germany. Although bombing accuracy improved over the years, strategic bombing attacks during the Vietnam and Korean Wars failed to live up to air theorists' expectations.

[7]Institute for National Strategic Studies, *Strategic Assessment 1995* (Washington: U.S. Government Printing Office, 1995), 4.

[8]Hallion, 4.

[9]For the purposes of this paper, "future conflicts" are conflicts that may occur in the next 10-15 years. Other conflict environments may include war on a larger scale with a peer competitor or limited military operations in military operations other than war. Implications and analysis derived from parallel war in a major regional contingency may or may not be pertinent in other conflict environments.

[10]Charles A. Horner, "The Air Campaign," *Military Review*, September 1   ).

[11]For additional information on the JFACC, see *Gulf War Air Power Surv*   ol. I. This book is edited by Eliot A. Cohen and elaborates on the origins, roles, and missions of the JFACC.

[12]Coyne, 156.

[13]John R. Pardo, Jr., "Parallel Warfare, Its Nature and Application" in *Challenge and Response* ed. Karl P. Magyar (Maxwell Air Force Base, AL: Air University Press, 1994), 277.

[14]Jeffery R. Barnett, *Future War* (Maxwell Air Force Base, AL: Air University Press, 199   9.

[15]Pardo, 282.

[16]Ibid., 278-279. History is replete with examples of battles in which there were simultaneous employment of forces. The D day landings are a good example. The landings on the beaches were near-simultaneous and were complemented by airborne landings, air attacks, naval bombardment, and deception operations. However, the entire Normandy operation was in fact a series of operations with the landings being only one part. Additionally, it did not achieve strategic paralysis.

[17]Ibid., 278.

[18]The author is not suggesting that future regional conflicts will be waged against only one state or that the United States will face the belligerent(s) alone. The possibility exists that the United States will face an alliance of adversaries in the conflict who could bring to bear a wider variety of technology and advanced weaponry.

[19]Barnett, 71.

[20]Ibid., 71-75.

[21]For a more detailed description of this "acceptable level", see FM 100-5, pages 1-4. This field manual articulates the expectations of the American people and the use of their military.

[22]The author ackowledges the possibility of engaging an enemy armed with weapons of mass destruction; deterring and engaging this type of adversary poses additional planning problems which is not suitable for the scope of this paper. The author will not elaborate on this issue due to imposed space constraints.

[23]Institute for National Strategic Studies, 11.

[24]Barnett, 102.

[25]Pardo, 293.

[26]The author would be remiss if he did not acknowledge the critical importance of logistics in prosecuting parallel warfare, but the intracies of deploying, establishing, and supporting the rapid buildup of air power in a remote region is a subject worthy of an entire monograph. Suffice it to say that the author recognizes the importance of logistical support, but will focus on other areas over which the JFACC has more direct control.

[27]Horner, 19.

[28]Richard M. Kessel, "Parallel Warfare, Anticipating the Enemy's Response" in *Challenge and Response* ed. Karl P. Magyar (Maxwell Air Force Base, AL: Air University Press, 1994), 304.

[29]For more information, reference Barnett, xxii.

[30]Ibid., xxii.

[31]Kessell, 302.

[32]Ibid., 303.

[33]Coyne, 56.

[34]The advanced planning process must be mentioned, but in the interest of space conservation the author will not elaborate on the details of this process. The amount of advanced planning will vary from conflict to conflict, but to successfully prosecute parallel war the initial aerial assault must be planned well in advance.

[35]Jerome V. Martin, *Victory From Above* (Maxwell Air Force Base, AL: Air University Press, 1994), 52.

[36]James P. Coyne, "Plan of Attack," *Air Force Magazine*, April 1992, 40-46; Martin, 53.

[37]Dick Cheney and Merrill McPeak, quoted in Martin, 69.

[38]Martin, 53. For an in-depth discussion of the ATO planning process, see Norman Friedman's *Desert Victory: The War for Kuwait.*

[39]Pardo, 292.

[40]Kenneth Allard, *Somolia Operations:Lessons Learned* (Washington: National Defense University Press, 1995), xi.

[41]AFM 1-1, Vol. II. *Basic Aerospace Doctrine of the United States Air Force* (Washington: U.S. Government Printing Office, 1992), 104.

[42]Horner, 26.

[43]Barnett, 94.

[44]Martin, 20, 34-46.

[45]U. S. Department of Defense, *Fact File* (Washington: U.S. Govt. Print. Off.,1994), 293.

[46]Pardo, 288-289.

[47]Martin, 54.

[48]Coyne, *Airpower in the Gulf,* 156-157.

[49]Ibid., 157.

[50]Richard P. Hallion, *Strike from the Sky* (Washington: Smithsonian Institution Press, 1989), 2.

[51]Barnett, 4.

[52]Barnett, 17; John A Warden in Richard H. Schultz, Jr. and Robert L. Pfaltzgraff, Jr., *The Future of Air Power* (Maxwell AFB, AL: Air University Press, July 1992), 80.

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